AMENDMENTS

IN THE CLAIMS:

In compliance with 37 C.F.R. §1.121(c), Applicant presents a claim listing with status indicators, and amendment of a claim.

Claims 1-16: CANCELED

17. (PREVIOUSLY PRESENTED) A system for detecting damage to a thermal protection surface of a spacecraft, the system comprising:
    a). A grid mounted with the thermal protection surface;
    b). An apparatus connected with the grid for detecting the change in the property of the grid; and
    c). An analyzer connected with the apparatus for receiving and analyzing the change in the property of the grid.

18. (PREVIOUSLY PRESENTED) The system of claim 17, wherein the grid comprises a material that undergoes a detectable change in a property of the grid when the thermal protection surface is damaged.

19. (PREVIOUSLY PRESENTED) The system of claim 17, wherein the grid comprises a material that ablates upon re-entry of the spacecraft into the earth's atmosphere,

20. (PREVIOUSLY PRESENTED) The system of claim 18, wherein the material is metallic wire, optical fiber, conductive paint, or any combination of these materials.

21. (PREVIOUSLY PRESENTED) The system of claim 17, wherein the grid mounted with the thermal protection surface is mounted on the exterior of the thermal protection

surface, embedded within the thermal protection surface, or mounted beneath the thermal protection surface, or any combination of these positions.

22. (PREVIOUSLY PRESENTED) The system of claim 17, wherein the spacecraft is a space shuttle.

23. (PREVIOUSLY PRESENTED) The system of claim 17, wherein the apparatus for detecting the change in property of the grid is a multiplexer.

24. (PREVIOUSLY PRESENTED) The system of claim 17, wherein the analyzer is a detector or processor.

25. (PREVIOUSLY PRESENTED) The system of claim 17, further comprising a cockpit display that receives the detected change in the property of the grid from the apparatus that detects the change in property of the grid.

26. (PREVIOUSLY PRESENTED) The system of claim 17, further comprising a telemetry system that receives the detected change in the property of the grid from the apparatus that detects the change in property of the grid.

27. (CURRENTLY AMENDED) The ~~grid~~ system of claim 17, wherein the grid mounted with the thermal protection surface is mounted on a seal that fastens parts of the spacecraft.